

REMARKS

The Office Action dated December 27, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-78 are currently pending in the application, of which claims 1, 24, 47, 61, and 75-78 are independent claims. Claims 47, 52, 54, and 78 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added, and no new issues have been raised that would require further consideration and/or search. Entry of the amendments is respectfully requested on the basis that it places the application in condition for allowance, or would materially simplify the issues for appeal. Claims 1-78 are respectfully submitted for consideration.

Claims 6-18, 29-41, 48-60, 62-74 were indicated as containing allowable subject matter but were objected to as being dependent from rejected base claims. Applicants thank the Examiner for this indication of allowable subject matter. The base claims from which claims 6-18, 29-41, 48-60, 62-74 depend should also be allowed, as discussed below, and consequently it is respectfully requested that the objection to claims 6-18, 29-41, 48-60, 62-74 be withdrawn.

Claims 61-74 and 76-77 were objected to on the grounds that they “merely recite a number of structures capable of performing a respective function” without reciting the execution of such a function. However, it is to be noted that in the apparatus claims such as those identified, it would not seem to be appropriate to discuss performing the

functions, since that would seem to convert the apparatus claim into a method claim, or potentially confuse the reader regarding whether an apparatus (defined by structures capable of performing various functions) or a method (defined by functions being performed) is being claimed. As the claims stand, the claims are definite and avoid that potential ambiguity. Accordingly, Applicants respectfully request that the objection to claims 61-74 and 76-77 be withdrawn.

Claims 47-60 and 78 were rejected under 35 U.S.C. 101, as being directed to non-statutory subject matter, but it was indicated that the claims could be amended to overcome the rejection. Without prejudice or disclaimer, the claims have been amended, and it is respectfully submitted that claims as amended are directed to proper statutory subject matter.

Claims 1-5, 19-28, 42-47, 61, and 75-78 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,154,775 of Coss et al. ("Coss"). Applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-23 depend, is directed to a method of handling data packets in a network device. The method includes receiving an incoming data packet. The method also includes parsing the incoming data packet to obtain a portion of the incoming data packet. The method further includes comparing said portion with rules stored in a rule table, where each rule of said rules specifies a set of actions. The method additionally includes selecting a match between said portion and a particular rule of said rules. The method also includes executing a particular set of actions specified by said

particular rule. Each rule field of said rules includes a mask and a selection flag used in the comparing said portion with each rule.

Claim 24, upon which claims 25-46 depend, is directed to a network device for handling data packets. The device includes a rules table. The device also includes means for receiving an incoming data packet. The device further includes means for parsing the incoming data packet to obtain a portion of the incoming data packet. The additionally includes means for comparing said portion with rules stored in said rule table, where each rule of said rules specifies a set of actions. The device also includes means for selecting a match between said portion and a particular rule of said rules. The device further includes means for executing a particular set of actions specified by said particular rule. Each rule field of said rules includes a mask and a selection flag used by the means for comparing said portion with each rule.

Applicants respectfully submit that Coss fails to disclose or suggest all of the elements of any of the presently pending claims.

Coss generally relates to methods and an apparatus for a computer network firewall with dynamic rule processing with the ability to dynamically alter the operations of rules. Coss provides, as illustrated at Figure 8 thereof, a rules table that includes a list of rules, each of which has a corresponding action associated therewith. In addition, each rule can have a “hit count” associated with rule.

Claims 1 and 24 each recite, in part, “each rule of said rules specifies a set of actions.” Coss fails to disclose or suggest at least this feature of claims 1 and 24. As can

be seen clearly from Figures 3 and 8 of Coss, each of the rules is associated with a single action, not a set of actions. Figure 3 and column 4, lines 31-34 were cited by the Office Action with respect to this feature, but neither portion of Coss discloses more than a single action per rule. Thus, Coss fails to anticipate claims 1 and 24, because Coss fails to disclose or suggest all of the features of claims 1 and 24.

Furthermore, it would not have been obvious to modify Coss such that its rules specify a set of actions. Coss is directed to a firewall that either drops or passes packets. It would not make sense for Coss to have a rule that specifies more than one of those two actions, because those two actions are mutually exclusive. Thus, one of ordinary skill in the art would not have found motivation or suggestion to modify Coss, even if it could be shown that other rules lists existed in which a set of actions were provided corresponding to each rule (not demonstrated in the Office Action, and not admitted). Accordingly, Coss also cannot possibly render the subject matter of claims 1 and 24 obvious. Thus, it is respectfully requested that the rejection of claims 1 and 24 be withdrawn.

In the “Response to Arguments” section, the Office Action asserted, as best understood, that “pass,” “drop,” or “proxy,” is the set of actions that corresponds to the claimed set of actions. Applicants respectfully submit that the alleged correspondence creates a fundamental inconsistency in the rejection.

Coss clearly indicates that any given rule is only associated with one of the actions from the set identified by the Office Action. Thus, although Coss may disclose the concept of a “set of actions” (not admitted), Coss does not disclose that “each rule of

said rules specifies a set of actions,” as recited in claims 1 and 24 (emphasis added). Instead, in Coss, each rule would specify **only a single action** from the set of actions identified by the Office Action. A single action is not a set of actions. Therefore, Coss’ disclosure cannot correspond to what is recited in the claims. Accordingly, it is respectfully requested that the rejection of claims 1 and 24 be withdrawn.

Additionally, claims 1 and 24 each recite, in part, “wherein each rule field of said rules includes a mask and a selection flag used [for] comparing said portion with each rule.” Coss also fails to disclose or suggest at least this feature of claims 1 and 24.

The Office Action cited column 7, lines 29-61, as allegedly corresponding to this feature. The cited passage of Coss discusses a “dependency mask” with reference to Figures 7 and 8 of Coss. The cited passage also mentions that a “hit count” field is used. As explained in Coss, “ ‘Hit count’ indicates the number of matches which must be found in the cache for the specified action to be taken.” These teachings do not correspond to what is claimed.

As noted above, the claimed “selection flag” is “used [for] comparing said portion with each rule,” as recited in claims 1 and 24. The “hit count” of Coss is not used for comparing a portion of a packet with a rule. Instead, “hit count” in Coss is used to compare the rule to the contents of the cache. Thus, for example, as Coss indicates: “in the dependency mask named “realaudio,” a count of 1 is used for passing UDP packets provided one requisite TCP session is active [and in] the dependency mask “telnet,” a count of 10 is used to drop packets to prevent overloading resources.” Accordingly, “hit

count” of Coss cannot correspond to the claimed “selection flag” because the “hit count” of Coss is used in comparing a rule to a cache, not in comparing a portion of a packet to a rule. Thus, for this additional reason, Coss fails to anticipate claims 1 and 24.

Furthermore it would not have been obvious to modify “hit count” of Coss to be used in comparing the rule to the portion of the packet. The very concept of “hit count” requires reference to historical data (to the extent any comparison is to be made). Thus, a “hit count” of one requires no comparison at all, but a “hit count” of ten absolutely requires comparison to historical data, which will be data outside the portion of the packet. One of ordinary skill in the art consequently would not have been motivated to modify Coss’ “hit count” to be “used [for] comparing said portion with each rule,” as recited in claims 1 and 24. Accordingly, Coss also cannot possibly render the subject matter of claims 1 and 24 obvious. Thus, it is respectfully requested that the rejection of claims 1 and 24 be withdrawn.

In the response to arguments section, the Office Action presented some statements that indicated disagreement with the distinction noted above. The Office Action, however, fails to raise any plausible interpretation in which the “hit count” of Coss would be used in comparing the rule to the portion of the packet. Instead, the Office Action made comments about general principles of interpretation and stated that the “hit count” is used “to indicate the number of matches which must be found in the cache for the specified action to be taken,” and then placed the claim limitation in parenthesis following this description. Applicants respectfully submit that the Office Action’s own

characterization of the utilization of the “hit count” demonstrates that the “hit count” is not “used [for] comparing said portion with each rule,” as recited in claims 1 and 24, and consequently does not correspond to what is recited in the claims.

Applicants recognize that the claims must be interpreted as broadly as reasonably possible, but Applicants respectfully submit that nevertheless every recitation of the claim must be considered in light of the understanding of one of ordinary skill in the art, reading the claim in light of the specification (including the context of the claim itself). Thus, Applicants respectfully submit that because “to indicate the number of matches which must be found in the cache for the specified action to be taken” (Office Action’s description of the function of “hit count”) is not equivalent to “used [for] comparing said portion with each rule” (as recited in claims 1 and 24) as that phrase would be understood by one of ordinary skill in the art, reading the claim in light of the specification, even under the broadest reasonable interpretation, therefore, it is respectfully requested that the rejection of claims 1 and 24 be withdrawn.

Claims 2-5, 19-23, 25-28, and 42-46 depend respectively from, and further limit, claims 1 and 24. Thus, it is respectfully requested that the rejection of claims 2-5, 19-23, 25-28, and 42-46 be withdrawn at least for the reasons discussed above.

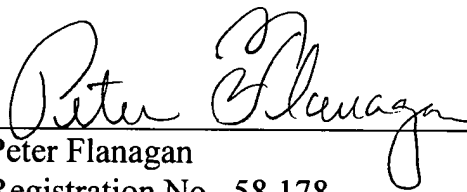
Although the rejection has been discussed in view of claims 1 and 24, independent claims 47, 61, and 75-78 (which each have their own respective scope) recite similar limitations and were not separately rejected. Thus, for the same or similar reasons, it is respectfully requested that the rejection of 47, 61, and 75-78 be withdrawn.

For the reasons set forth above, it is respectfully submitted that each of claims 1-78 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-78 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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